9 MAY 1978

MEMORANDUM FOR: Chief, Security Staff, OL

STATINTL FROM: [redacted]
Systems Analysis Branch, EO/OL

SUBJECT: SECOND System Definition Study

1. We are pleased to submit, for your approval, the attached System Definition Study for the SECOND project. This study was prepared as a joint effort by members of your staff and myself.

2. If you would like SAB to follow up with a project proposal as outlined in the recommendation, please sign below and return the original copy. The current Computer Services Request (24A38ED) will then be extended to include the project proposal.

STATOTHR 3. If there are any questions, please call me on extension [redacted]

/s/ [redacted] STATINTL

Attachment: System Definition Study

CONCURRENCE:

/s/ 9 MAY 78
Chief, SAB/EO/OL Date

Chief, B Division, ODP Date

Chief, Security Staff, OL Date

OL 8 1922

OS 8 1943

SUBJECT: SECOND System Definition Study

Distribution:

Orig - Return to OL/EO/SAB (Official) w/att
1 - C/B Div/ODP w/att
(1) - C/SS/OL w/att

Approved For Release 2002/05/07 : CIA-RDP96B01172R000900020001-1

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I. INTRODUCTION

This System Definition Study is in response to a request from the Director of Logistics, for Office of Data Processing(ODP) support on the Industrial Security Program (SECOND). Included in this report is a description of the current procedure, the problems with the current procedure, an enumeration of the system requirements and a recommendation to automate the Industrial Security program.

II. MISSIONS AND OBJECTIVES

1. The Office of Logistics, Security Staff, (OL/SS) has been tasked with the responsibility of maintaining an industrial security program. The industrial security program was established to provide secure methods by which the Central Intelligence Agency may procure supplies, equipment, services, and conduct research and development outside the Agency with the least risk of exposing the classified purpose to unauthorized personnel.

2. OL/SS receives approximately eighty calls per day from interested persons and offices both internal and external to the Agency. In order to answer these inquiries in a timely manner and provide support to all using Agency components it is necessary to maintain manually a 3x5 card file of approximately 65,000 cards. Approximately 50 of the eighty calls per day require accessing the card file.

III. DESCRIPTION OF CURRENT SYSTEM

1. The unique nature of the Agency's procurement methods place different and unusual requirements on the Agency's industrial security program. There are two areas of classification in the Agency's procurement methods:

a. the relationship of the Agency to the contractor, i.e., whether the identity of the Agency as purchaser is classified;

b. the classification of the work and reports of the end product.

2. When an Agency component levies a procurement requirement upon OL, the requirement normally specifies the classification of both the Agency contractor relationship and the end product. If either aspect is classified the following takes place:

a. OL/SS makes a manual review of its records to determine whether the specified vendor has a current or prior classified relationship with the Agency. If no prior relationship exists the following steps are initiated;

1. the corporate officer's name is run through Office of Security indices;

2. the vendor will be contacted in person, utilizing CIA credentials;

3. the corporate officer will be told of the Agency interest in doing business with them;

4. requested to sign a secrecy agreement; and

5. requested to provide sufficient biographic data for security processing purposes.

b. If a prior relationship exists, the above process, 1 through 5, is performed as required to reinstate the contractor.

3. Once the above steps are completed and the Office of Security issues an approval the corporate officials are visited once again, and requested to appoint a corporate security officer who will be OL/SS referent for the term of the contractual relationship. Thereafter, the bulk of OL/SS contact is with the corporate security officer who will have been approved and briefed. He will be furnished with the Security Requirements for Contractors (Green Book) or Standard Security Procedures for Contractors (White Book), a supply of Personal History Statements, Request for Industrial Security Approval forms, and codeword access, as appropriate. He will also have a supply of Form 670 (index cards) which will ultimately comprise OL/SS records of Industrial Security Approval (ISA).

4. Once the contractor furnishes OL/SS with the required data to process an Industrial Security Approval (ISA), the following takes place;

a. All documents are dated and forwarded to Security for processing;

b. A Form 670 (3x5 card) is filed in the pending file;

c. if Security grants the Industrial Security Approval:

1. the card is moved from the pending file to the active file, two copies are kept, one alphabetical by name and one by contractor and name.

2. Notify contractor.

d. If Industrial Security Approval is not granted:

1. Notify contractor;

2. File disapproval notice.

5. The contractor continues to supply data to OL/SS as required by the regulations. If an employee leaves the company, transfers to another project, or the contract is completed, the Form 670 (3x5 card) is moved from the active file to the termination file.

6. A liaison file is maintained for personnel in other Federal Agencies and departments on whom security liaison approvals requested by OL have been granted.

7. A Contact Approval file is maintained for personnel who are contacted before a full Industrial Security Approval is processed.

8. The information contained on Form 670 (3x5 card) in the system consist of the following:

Name
Date of Birth
Place of Birth
SSN
Security File Number
Contractor Name
Contractor Address
Job/Title
DOD Clearance
    Level
    Date
Industrial Security Approval
    Level
    Approval Date

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IV. PROBLEMS WITH THE CURRENT SYSTEM

1. Many problems can arise when handling a manual card system of this size. With the Industrial Security system the most prominent problems are the following:

a. Ad hoc questions often require hours of searching cards, tallying and notekeeping, and typing detail listings after the information is collected.

b. The current method of updating the cards is antiquated. Physical sorts are required, in that cards must be matched and placed into the correct position in the appropriate file. As changes are processed the cards must be physically moved from one file to another.

c. Cards are stored in OL/SS. Care must be taken that nothing happens to the cards; a dropped file would take hours of manual work to reconstruct.

d. There are no standards to assure cards are not misfiled or lost.

e. There is no backup for the file.

V. USER REQUIREMENTS

1. The present requirements for the Industrial Security system are as follows:

a. Conversion of present card files (ISA contractor personnel, pending file, termination).

b. Provide the capability to query the data on any data element, or combination of data elements, within the database with an immediate response. Typical queries are:

1. What is the level of the ISA for John Doe?

2. What is John Doe's job title?

3. Has John Doe signed a secrecy agreement?

4. How many people working for the ABC Company in the Boston area have a Top Secret clearance, three years old or older?

5. What is the facility approval status of the XYZ Company?

c. The ability to update a database, (add, change, delete), approximately 700 transactions a month.

d. Addition of five data elements:

1. date briefed;

2. date terminated;

3. security agreement;

4. facility approval status; and

5. facility approval level

e. Produce preformatted alphabetical printout by individual names on request.

f. Produce preformatted alphabetical printout by individual names within contractor on request.

g. The ability to produce, on request, ad hoc reports.

h. Provide a validation of all data recorded in the system to ensure its accuracy.

i. Provide the capability for reporting all deliquent security requests.

j. Provide a method of backup in the event of primary data or system damage .

2. System Elements:

A list of required elements are as follows:

a. NAME (Last, First, MI)

b. Social Security Number

c. Date of Birth

d. Place of Birth

e. Security File Number

f. Contractor Name

g. Contractor Address (Street, City, State, Zip)

h. Job Title

i. Work Location (Street, City, State, Zip)

j. DOD Clearance (Date, Level)

k. Industrial Security Approval (Date, Level)

l. Date Briefed

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m. Date Terminated

n. Security Agreement Signed

o. Facility Approval Status

p. Facility Approval Level

VI. ALTERNATIVES

1. In order to meet all the requirements of the customer, a database management system appears to be the most desirable solution. The database management system will permit the user to store, manipulate, retrieve and display quantities of data.

2. There are three database management systems currently used within the Office of Data Processing (ODP), Rapid Access Management Information System (RAMIS), National Information Processing System (NIPS), and General Information Management System (GIMS).

3. In search of a system to meet the requirements stated RAMIS and NIPS were rejected.

3.1 RAMIS was rejected primarily because it has not yet proven itself in handling a moderately sized (approximately 35,000 records) database.

3.2 The NIPS system was rejected from consideration because it is strictly a batch system and will not support the rapid query capability desired in the requirements. In addition, NIPS does not support an inter-file query capability. It should also be noted that if the system is implemented in a NIPS batch mode and the user requirements are not met, the system cannot be converted from batch to on-line mode with a minimal effort.

4. GIMS is a database system that has a hierarchical data storage philosophy. In addition to data storage and retrieval, GIMS handles its own terminal communications, printers and input/output methods. The database can be available in either a batch or an on-line mode. The report facility uses Basic Automatic Report Format (BARF) or special PL/I programs. An Industrial Security system under GIMS could have the following structure:

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a. A pending file which would contain basic biographical data on personnel who have industrial security approvals in process.

b. A cleared contractor file which would contain biographical data on personnel who have active industrial security approvals.

c. A termination file which would contain biographical data on personnel who have at one time held an industrial security approval.

d. A name index file which would contain names (last, first) of personnel in the cleared contractor file. This file would provide the ability to query by name and receive a quick response on personnel who have an active approval.

e. A contractor file which would contain data on the contractors who have personnel with industrial security approvals.

f. The database would be available under the MVS/JES3 system in either the batch or an on-line mode.

g. In the batch mode, GIM statements to update, query, and extract data would be created in a file on the VM/370 system and batched to the GIM system through a Batchmon link. All output would then be printed under the JES3 system.

h. In the on-line mode, data input would be accomplished directly through GIM supported menus displayed at the terminal and read by routines coded in the GIM procedure language. Ad hoc queries could be formed in GIM statements directly at the terminal with an immediate response to the same terminal. Copies of these queries can be printed at a Texas Instruments printer immediately connected to the terminal or at a printer connected to the computer running the GIM system.

VII. RECOMMENDATION

1. It is recommended that the SECOND system be implemented using the on-line GIMS database system for the following reasons:

   a. The on-line GIM system will offer the user immediate updates through menu input, and a prompt resolution of errors.

   b. Once the database is operational, the primary activity will be queries. The GIMS user language is English like and will permit the user to access data without knowing how or where the data is stored.

   c. The GIMS off-line batch system was rejected primarily because of the user requirement for immediate response to queries. Other considerations were, database and listings are always out of date because of projected frequent updates, an incorrect query is not detected until a listing is received, and ad hoc reports on a batch database can be cumbersome.

   d. Cost for the on-line and off-line systems is relatively equal.

2. The GIM system has the capability to more than adequately meet the requirements specified. However, the user should be aware that the level of knowledge needed by both the user and programmer to create and maintain the system is very high. Learning the GIM system is a non-trivial process and the user is required to learn the GIM query language, GIM data extraction process, and the basic VM commands. Use of ODP Training courses and SAB personnel's expertise should provide the necessary skills for OL/SS to operate the system.

3. GIMS had a bad track record prior to the release of the 360/195 computer. Since its implementation on a 370/168 we have experienced an average availability rate of 92%. Response time is also currently acceptable.

4. In summary, GIMS seems to be the only ODP database management system which has the capability to satisfy the requirements of this particular system.

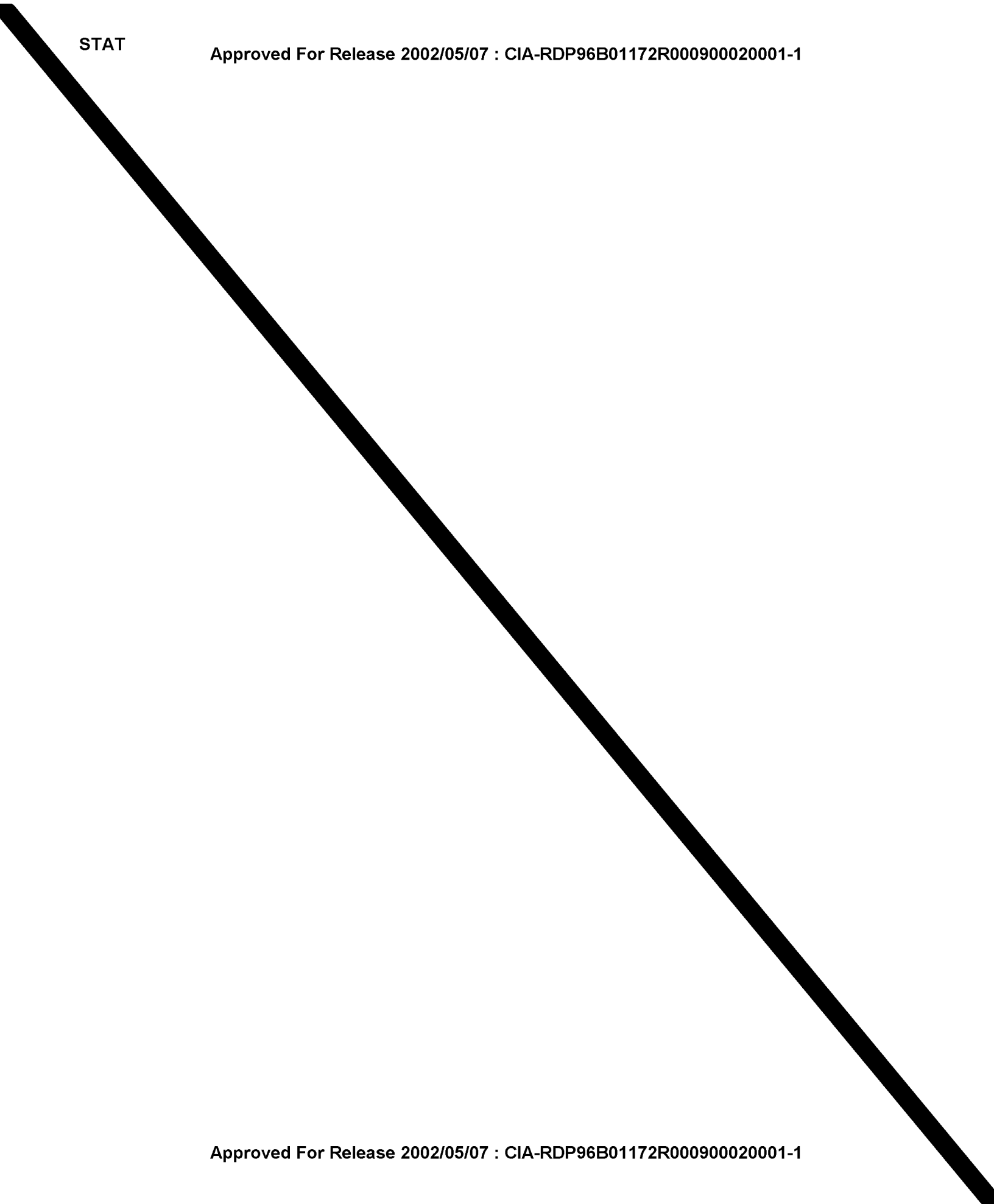
VIII. COST AND TIME REQUIREMENTS

1. It is estimated that this system will require 8 months to develop and will cost approximately $34,510. A breakdown of cost is provided:

	TIME	COST	MACHINE COST
Verify Data Elements	40 Hrs	$680	---
Prepare Menus	80	1360	$ 150
Develop Procedures and Dictionaries	960	16,320	12,000
Develop BARF Reports	80	1360	150
User Testing and Training	120	2040	450

2. Once the system is developed it is estimated that the conversion effort and full implementation will require 10 man-months for OL/SS to input data. The machine cost for conversion will be approximately $22,602. If the system is accepted it is recommended that other conversion methods be considered (i.e. IV Phase, key-punching) which may reduce the time and cost.

3. The projected operating cost of this system after implementation will be approximately $4,000 a month.



Approved For Release 2002/05/07 : CIA-RDP96B01172R000900020001-1